

Application No.: 10/630,913

Docket No.: 200313704-1 (1509-437)

AMENDMENTS TO THE DRAWINGS:

Please substitute the attached drawing replacement sheet, Figure 2, including Annotated Sheet Showing Changes

MAR 13 2007

Application No.: 10/630,913Docket No.: 200313704-1 (1509-437)**REMARKS**

Reconsideration and allowance of the subject application in view of the foregoing amendments and the following remarks is respectfully requested.

Claims 1-20 remain pending in the application.

The use of the trademark Java™ and JVM™ has been noted and corrected.

The disclosure is objected to because of the noted informalities. In response, the disclosure was amended in accordance with the Examiner's helpful suggestions. Accordingly, this objection should be withdrawn.

The drawings were objected to because the number "21" in Figure 2 is mistyped as "2" for identifying "sEc Code Generation". In response, a "Replacement Sheet" for Figure 2 is being submitted concurrently herewith. Accordingly, this objection should be withdrawn.

Claims 1, 3, 4, 10, 11, 16, 17, and 19 is objected to as noted in the Office Action. In response, claims 1, 3, 4, 10, 11, 16, and 17 have been amended in accordance with the Examiner's helpful suggestions and claim 19 has been cancelled. Accordingly, this objection should be withdrawn.

Claims 7, 8, 11, 14 – 16, and 18 are rejected under 35 U.S.C. 112, second paragraph as noted in the Office Action. In response, claims 7, 8, 11, and 14 – 16 have been amended in accordance with the Examiner's helpful suggestions and claim 18 has been cancelled. Accordingly, this rejection should be withdrawn.

Claims 18 – 20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. In response, claims 18 and 19 have been cancelled in accordance with the Examiner's helpful suggestions and claim 20 has been amended. Accordingly, this rejection should be withdrawn.

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Claims 1, 2, 4 – 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Chauvel et al. Applicants respectfully traverse this rejection.

As mentioned in the present specification, a first aim of the invention is to make the application drive the semantic content of the JVM 11 by creating new opcodes (sEc opcodes). This results in adaptive code set for a particular JVM 11, thus creating an application-specific or application-tuned JVM (26 and figure 2) (page 7, lines 28 – 31). This aim is also reflected in claim one, which recites "the method comprising augmenting the byte code set of the virtual machine with application-specific opcodes by reference to said application, thereby constituting an application domain-specific virtual machine."

In the Office Action, it is contended that this is met with figure 4, iterative 412 – "replace iterative loop with proprietary code sequence." Nowhere does Chauvel et al. refer to application-specific opcodes. Instead Chauvel et al. is concerned with iterative processes for application-specific circuitry as exemplified below.

As stated in Chauvel et al. on page 3, paragraph 37, "A byte-code sequence can be received by an appliance in a number of ways as is well known, such as by being explicitly loaded during manufacture of the appliance, by being downloaded over a wire or wireless connection from a server, etc. The JVM translates the byte-codes into processor instructions for implementation by the embedded processor located within an appliance at step 128, such as processor 104 of FIG. 5. The JVM also modifies certain sequences of the byte-code by replacing the selected sequence with a proprietary construct that is executed by acceleration circuitry connected to the processor in order to accelerate execution of application program." What is significant is the reference to the acceleration circuitry.

The acceleration circuitry is again mentioned in Chauvel et al. on page 3, paragraph 50, "However, if the byte-code is a proprietary code, then it is executed on acceleration circuitry included within the JAVA appliance in step 420."

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Chauvel et al. again refers to proprietary code sequences on page 4, paragraph 1, "Thus, advantageously, performance can be improved and code size reduced by replacing certain iterative loop sequences with corresponding proprietary code sequences. Advantageously, if an additional function is performed within the loop that is not supported by the acceleration circuitry, the byte-codes that perform this function can be filtered out of the sequence that is being replaced and then included with the proprietary code sequence. In this manner, the non-supported function will then be interpreted by the JVM."

Applicant respectfully submit that Chauvel et al. is not concerned with the invention recited in claim 1. Iterative processes are not the same as application-specific opcodes. In the present invention, the opcodes are specific to applications, whereas in Chauvel et al., the proprietary code sequence is specific to hardware. Accordingly, this rejection should be withdrawn.

Claims 3 is rejected under 35 U.S.C. 103(a) as being obvious over Chauvel et al. In response, claim 3 is dependant on claim 1 and should be patentable for the reasons discussed above with respect to claim 1 as well as on its own merits. Accordingly, this obviousness rejection should be withdrawn.

All objections and rejections having been addressed Applicant respectfully submits that the application is in condition for allowance and a Notice to that effect is earnestly solicited.

The Examiner is invited to telephone the undersigned, Applicant's attorney of record, to facilitate advancement of the present application.

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To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

LOWE HAUPTMAN & BERNER, LLP



Kenneth M. Berner
Registration No. 37,093

1700 Diagonal Road, Suite 300
Alexandria, Virginia 22314
(703) 684-1111
(703) 518-5499 Facsimile
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KMB/lhb

APPLICATION SPECIFIC OPTIMIZATION OF INTERPRETERS FOR EMBEDDED SYSTEMS

Application No. 10/630,913

Inventor: Venugopal K. SRINIVASAMURTHY

Annotated Sheet Showing Changes

